

## Material: ASTM A 29 1045

### Standard Specification for Hot And Cold-Finished Carbon and Alloy Steel Bars

**Group:** Ferrous Mild Steel Alloys

**Sub Group:** ASTM A 29 1045 Hot And Cold-Finished Carbon and Alloy Steel Bars

**Application:** Intended for Valve, Pump, General Engineering, Automotive and Other Industries

**Grade Belongs to the Industry:** Bar, Wire, Tube and Forging

Chemical Composition			Heat Treatment	
Carbon	C %	0.430 - 0.500	As- Cast or Normalizing or Annealing or Hardening + Tempering	
Manganese	Mn %	0.600 - 0.900		
Phosphorus	P %	0.040 max.		
Sulphur	S %	0.050 max.		
Copper	Cu %	0.200 min.		
Aluminium	Al %	0.020 max.		
Boron	B %	0.0005 - 0.003		
Niobium	Nb %	0.015 max.		
Vanadium	V %	0.020 max.		
Iron	Fe %	Balance		
-	-	-	<b>Mechanical Properties</b> Tensile Strength in Mpa 570 - 862 Yield Strength in Mpa 310 min. Elongation in % 10 min. Reduction of Area in % 35 - 45 Hardness in HB 163 - 321 Impact in Joule -	
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Cross Reference Table			
Material	Standard	Country	Grade Belong to the Industry
A915 Grade SC 1045	ASTM	USA	Casting
J04502	UNS	USA	Bar, Wire, Tube and Forging
1045	AISI	USA	Bar, Wire, Tube and Forging
1045	AS	Australia	Bar, Wire, Tube and Forging
1045	SAE	USA	Bar, Wire, Tube and Forging
A 108 1045	ASTM	USA	Bar, Wire, Tube and Forging
1045	ASTM	USA	Bar, Wire, Tube and Forging

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